Remarks

The claimed invention

The present invention includes methods of searching collections of linked objects and displaying the results. The invention is of particular utility when the links between objects (*e.g.*, legal citations or bibliographic references) themselves tend to convey useful information about the objects. According to the inventive methods, once a search group is acquired, the links from the target objects are used to determine at least one display attribute of the search set when it is displayed to the user. For example, links may be displayed as arrows or other connectors, or color, shape, size, position, highlighting, graphical flags, and/or labeling text may be used to convey information about the links.

The prior art

Shah is directed to a metadatabase system for indexing heterogeneous groups of documents and images. The system allows searching of metadata to locate documents, and allows a user to associate objects with one another.

Shklar is directed to another system for representing data having heterogeneous types. The system tries to provide a uniform presentation format by analyzing the internal organization of the data (*e.g.*, into paragraphs, sections, articles, chapters, or frames), and displaying selected portions of the data.

Rejections under 35 U.S.C. § 102

Claims 1, 16, 17, 19, and 20 stand rejected under 35 U.S.C. § 102(a) as anticipated by Shah. This rejection is respectfully traversed for the reasons set forth below.

Independent claim 1 recites a method of searching a collection of linked objects and displaying the results. A search group of heterogeneously typed objects is acquired, wherein at least one of the objects comprises a link to another object. For at least a portion of the objects in the search group a set of targets of links from the objects is determined, including determining whether the link targets are inside the search group. A representation of at least one searched object is then displayed, the representation having at least one display attribute determined by the set of link targets.

Shah does not teach the recited feature of claim 1 of *determining ... a set of targets of links from the objects, including determining whether link targets are inside the search group.* While Shah does describe web pages as one of the types of documents that can be indexed by the InfoHarness system, there is absolutely no disclosure in Shah of determining the *targets* of any internal links. The paragraphs cited in the Office Action (page 18, lines 9-15; page 22, left column, line 21 – right column, line 9) describe searching a variety of document types, and displaying them to a user (*e.g.*, on a client-side browser). Applicant agrees that it is possible for a user to follow an internal link when a document is viewed in a browser. However, there is no disclosure or suggestion in Shah of taking a set of such links and determining whether their targets are inside the search group, whether by user or by search engine.

Finally, there is no teaching in Shah of the additional recited feature of *displaying a representation of at least one searched object, the representation having at least one display attribute determined by the set of linked targets.* "Display attribute" is defined at page 4, lines 3-5, of the instant application as "a display property (including but not limited to color, shape, size, position, highlighting, graphical flags, and labeling text) that may be used to convey information about an object." This limitation is not satisfied simply by displaying an HTML page with embedded links, as described in the cited reference, because no display attribute of the page is determined by the *linked targets*. Instead, the display (including any labeling text) is based solely on the information contained in the HTML page itself and the browser settings.

Since Shah does not teach or suggest the above-described elements of claim 1, Applicant submits that claim 1 is not anticipated by Shah, and requests reconsideration and withdrawal of the rejection.

Independent claim 16 recites a method of searching a collection of objects and displaying the results. A first search group of objects is acquired, and a representation of at least a portion of the first search group of objects is displayed on a graph. One or more members of the first search group of objects are then annotated, wherein annotations may be selectively displayed with the representation of the annotated objects. Dependent claims 17, 19, and 20 depend directly or indirectly from claim 16, and recite additional patentable features thereover.

Applicant agrees with the Examiner's general definition of "annotation," as drawn from the Microsoft Computer Dictionary, and this definition is how the term is used in the instant

application. However, Applicant disagrees that this is the meaning of the term as used by Shah, as further discussed below.

Applicant further disputes the statement in the Office Action that "the features upon which applicant relies (i.e., "annotation in the sense that the term is used in the present application" and "internal links") are not recited in the rejected claims. The term "annotating" is certainly used in claim 16, and that term must be given the same meaning that it has in the specification. MPEP 2111.01; *see also* Applied Medical Resources v. United States Surgical Corp, 47 USPQ2d 1289, 1293 (Fed. Cir. 1998) ("While the experts may use the same words ... to describe both the ... patent [in suit] and the [prior art device], it is apparent that they are being used in different ways to connote different intended functions. The [prior art device] cannot anticipate the ... patent simply by possessing identically named parts, unless these parts also have the same structure or otherwise satisfy the claim limitations, and were understood to function in the same way by one skilled in the art.") Since "annotating" must be given the same meaning it has in the specification, Applicant submits that claim 16 *does* recite "annotation in the sense that the term is used in the present application," contrary to the remarks in the Office Action.

As acknowledged by the Office Action at page 2, Shah "teaches that users can set up annotation relationships among artifacts or relationships correlating all documents about a certain subject without explicitly including them in a collection." This is not consistent with the definition of annotation adopted by the Office Action and used in the present application: "a note or comment attached to some part of a document to provide related information." Thus, Applicant submits that Shah does not teach annotation as recited in claim 16.

In addition, Shah does not teach the display of search results on a graph, as also recited by claim 16. The Office Action cites page 22, right column, lines 3-23, of Shah for display on a graph.[1] "Graph" is defined in the specification of the instant application at page 4, lines 11-13, as "a two-dimensional or three-dimensional visual representation of linked objects, where a link is displayed as a connector." The cited paragraphs describe only how a *single* object may be

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1 Applicant notes that this citation is made in connection with claim 18, which was cancelled with the last Office Action Response. At that time, the feature that items are displayed on a graph was added to claim 16. Applicant requests confirmation that the previous amendment was entered.

viewed, for example in a web browser or by email attachment. They do not discuss the layout of *representations* of multiple objects in a search result as a graph.

Since Shah does not teach or suggest the above-described elements of claim 16, Applicant submits that claim 16 is not anticipated by Shah, and requests reconsideration and withdrawal of the rejection as to that claim and its dependent claims 17, 19, and 20.

Rejections under 35 U.S.C. § 103

Claims 2-15 stand rejected under 35 U.S.C. § 103(a) as obvious over Shah in view of Shklar. This rejection is respectfully traversed for the reasons set forth below.

Independent claim 1 is discussed above. Independent claim 2 recites a method of searching a collection of linked objects and displaying the results. A search group of objects is acquired, wherein at least one of the objects comprises a link to another object. For at least a portion of the objects in the search group a set of targets of links from the objects are determined, including determining whether the link targets are inside the search group. A representation of at least one searched object is displayed, the representation having at least one display attribute determined by the set of link targets. Displayed representations are arranged into a plurality of display layers, which can be independently hidden or displayed. Dependent claims 3-15 depend in the alternative from claims 1 or 2 (directly or indirectly), and recite additional patentable features thereover.

Claim 2 includes the limitations discussed above in connection with claim 1, namely *determining ... a set of targets of links from the objects, including determining whether link targets are inside the search group* and *displaying a representation of at least one searched object, the representation having at least one display attribute determined by the set of linked targets*. As discussed above, these features are neither taught nor suggested by Shah, which does not determine a set of targets of links from the objects, determine whether link targets are inside the search group, or display a representation having a display attribute determined by the linked targets.

These deficiencies are not remedied by Shklar, which is relied upon primarily to teach the use of layers. In addition, the Office Action points to Figs. 10 and 11 as examples of search documents that contain internal links. As Applicant understands the "links" in these documents, they represent anchors to sections of the same document (*e.g.*, majority and dissenting opinions

within a single document describing a case). As such, these links are not within the scope of claims 1 and 2, which each recite "wherein at least one of the objects comprises a link to *another* object" (emphasis added).

In addition, Shklar does not describe or suggest determining whether a set of link *targets* from a search group are inside the search set, as recited by claims 1 and 2. Nor does Shklar describe or suggest displaying a representation having at least one display attribute determined by the link *targets*. Even if the "links" described by Shklar fell within claims 1 and 2, the display attributes do not depend on the *targets*, but on content present in the links and the source document.

Since Shah and Shklar do not teach or suggest the above-described elements of claims 1 and 2, whether taken separately or together, Applicant submits that these claims are not obvious over Shah and Shklar, and requests reconsideration and withdrawal of the rejection as to claim 2 and dependent claims 3-15.

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